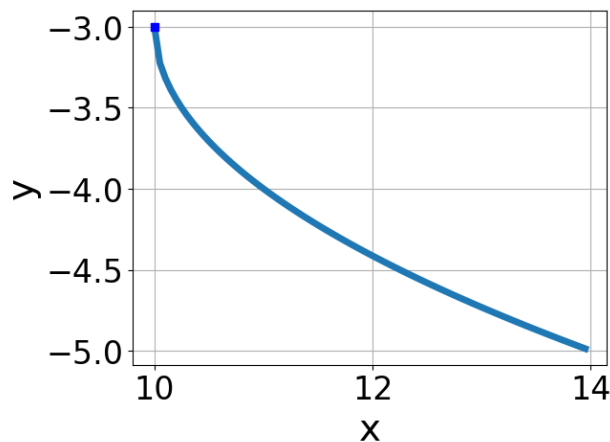


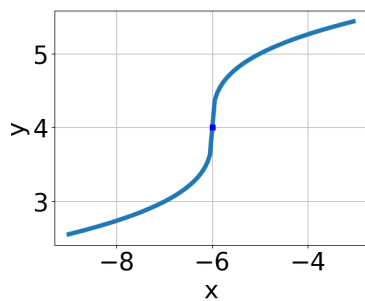
1. Choose the equation of the function graphed below.



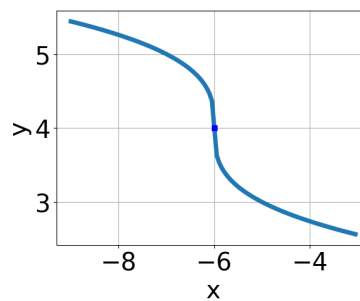
- A.  $f(x) = -\sqrt{x+10} - 3$   
 B.  $f(x) = \sqrt{x+10} - 3$   
 C.  $f(x) = -\sqrt{x-10} - 3$   
 D.  $f(x) = \sqrt{x-10} - 3$   
 E. None of the above

2. Choose the graph of the equation below.

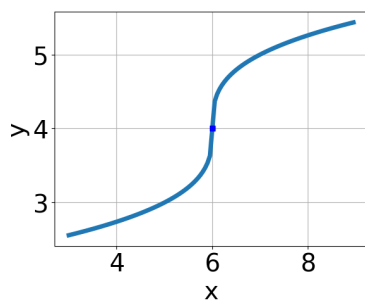
$$f(x) = \sqrt[3]{x-6} + 4$$



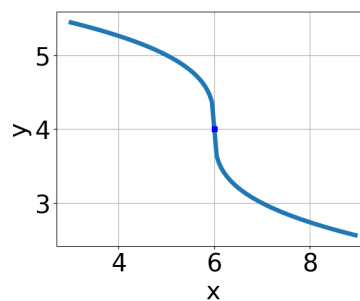
A.



C.



B.



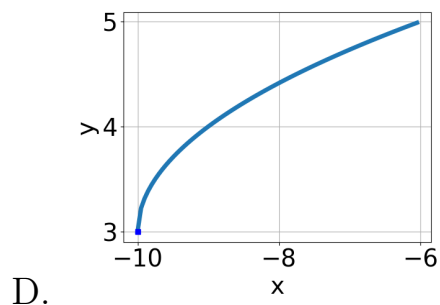
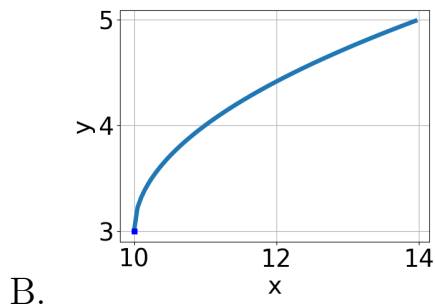
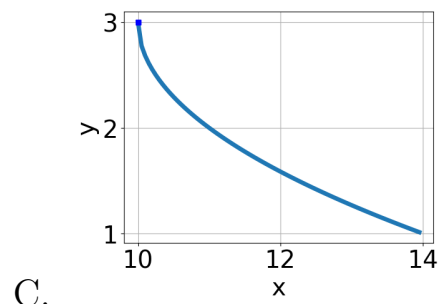
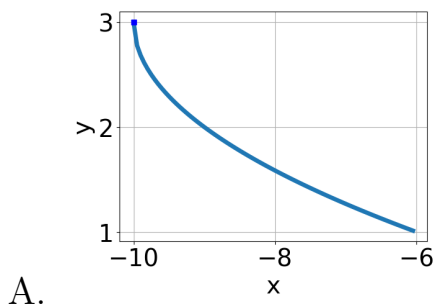
D.

E. None of the above.

---

3. Choose the graph of the equation below.

$$f(x) = \sqrt{x + 10} + 3$$



E. None of the above.

---

4. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{48x^2 - 30} - \sqrt{-4x} = 0$$

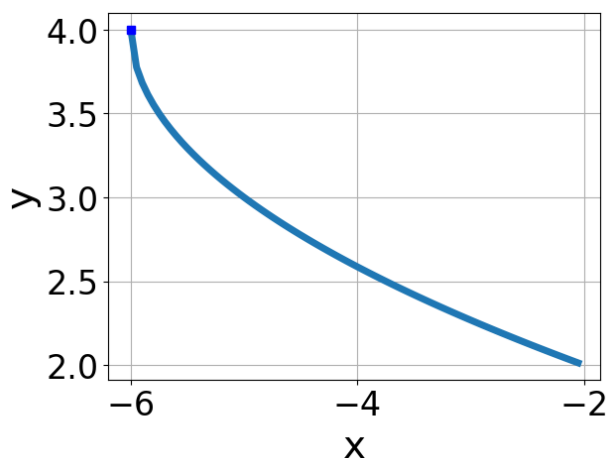
- A.  $x \in [-2.83, 0.17]$
  - B.  $x \in [-0.25, 3.75]$
  - C. All solutions lead to invalid or complex values in the equation.
  - D.  $x_1 \in [-0.25, 3.75]$  and  $x_2 \in [0.79, 0.87]$
  - E.  $x_1 \in [-2.83, 0.17]$  and  $x_2 \in [0.67, 0.76]$
-

5. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{9x + 5} - \sqrt{5x + 5} = 0$$

- A.  $x \in [-2.98, -1.79]$
  - B.  $x_1 \in [-1.09, -0.92]$  and  $x_2 \in [-0.87, -0.55]$
  - C.  $x_1 \in [-0.63, -0.24]$  and  $x_2 \in [-0.55, 0.11]$
  - D.  $x \in [-0.45, 0.4]$
  - E. All solutions lead to invalid or complex values in the equation.
- 

6. Choose the equation of the function graphed below.



- A.  $f(x) = -\sqrt{x + 6} + 4$
  - B.  $f(x) = \sqrt{x - 6} + 4$
  - C.  $f(x) = \sqrt{x + 6} + 4$
  - D.  $f(x) = -\sqrt{x - 6} + 4$
  - E. None of the above
- 

7. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-24x^2 + 21} - \sqrt{10x} = 0$$

- A. All solutions lead to invalid or complex values in the equation.
  - B.  $x \in [-1.29, -0.35]$
  - C.  $x_1 \in [-1.29, -0.35]$  and  $x_2 \in [0.64, 0.94]$
  - D.  $x_1 \in [0.44, 1.41]$  and  $x_2 \in [0.96, 1.3]$
  - E.  $x \in [0.44, 1.41]$
- 

8. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-3x + 2} - \sqrt{-6x + 7} = 0$$

- A. All solutions lead to invalid or complex values in the equation.
  - B.  $x \in [1.08, 1.84]$
  - C.  $x_1 \in [-0.34, 0.84]$  and  $x_2 \in [1.4, 2]$
  - D.  $x \in [-3.15, -1.87]$
  - E.  $x_1 \in [-0.34, 0.84]$  and  $x_2 \in [0.2, 1.6]$
- 

9. What is the domain of the function below?

$$f(x) = \sqrt[3]{-4x + 9}$$

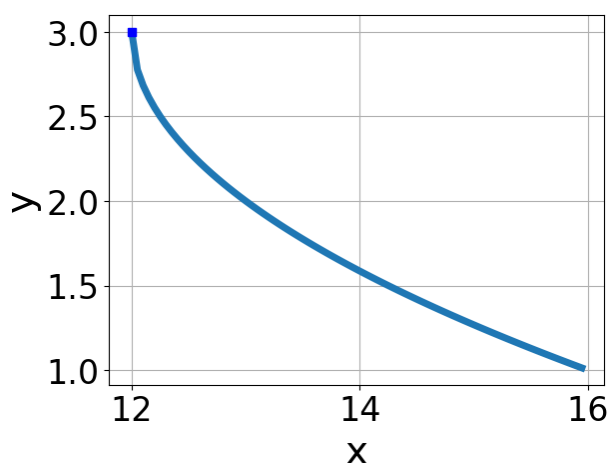
- A. The domain is  $(-\infty, a]$ , where  $a \in [-2.6, 0.5]$
  - B. The domain is  $(-\infty, a]$ , where  $a \in [1.3, 2.8]$
  - C. The domain is  $[a, \infty)$ , where  $a \in [1.2, 2.7]$
  - D.  $(-\infty, \infty)$
  - E. The domain is  $[a, \infty)$ , where  $a \in [-1.4, 1.6]$
- 

10. What is the domain of the function below?

$$f(x) = \sqrt[4]{7x + 3}$$

- A.  $[a, \infty)$ , where  $a \in [-2.2, 1.3]$
- B.  $(-\infty, \infty)$
- C.  $(-\infty, a]$ , where  $a \in [-3.5, -0.5]$
- D.  $[a, \infty)$ , where  $a \in [-5.8, -2.2]$
- E.  $(-\infty, a]$ , where  $a \in [-1.6, 0.1]$

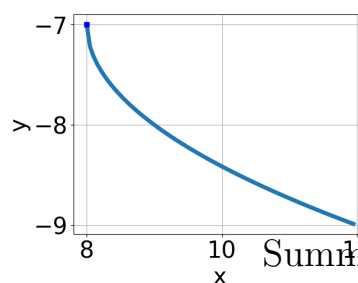
11. Choose the equation of the function graphed below.



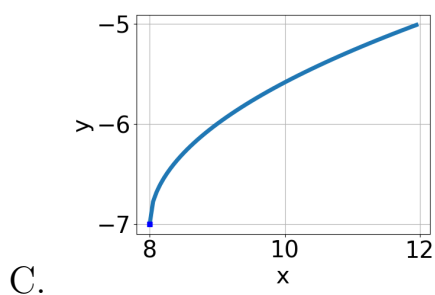
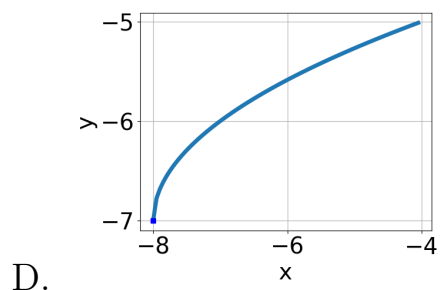
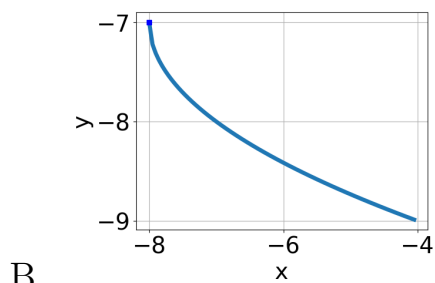
- A.  $f(x) = \sqrt[3]{x+12} + 3$
- B.  $f(x) = -\sqrt[3]{x-12} + 3$
- C.  $f(x) = -\sqrt[3]{x+12} + 3$
- D.  $f(x) = \sqrt[3]{x-12} + 3$
- E. None of the above

12. Choose the graph of the equation below.

$$f(x) = -\sqrt{x-8} - 7$$



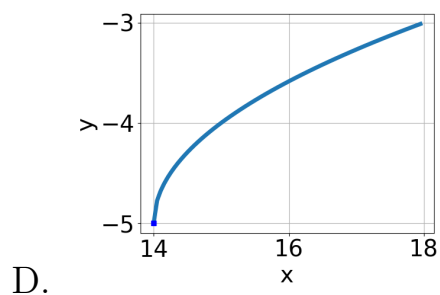
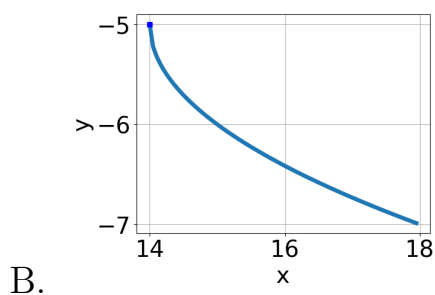
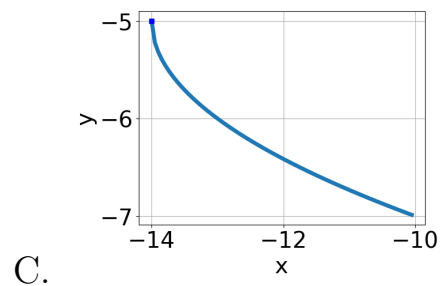
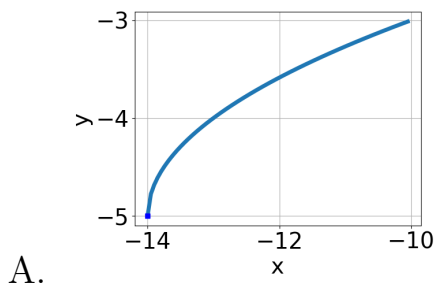
A.



E. None of the above.

13. Choose the graph of the equation below.

$$f(x) = \sqrt{x+14} - 5$$



E. None of the above.

14. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-9x^2 - 15} - \sqrt{24x} = 0$$

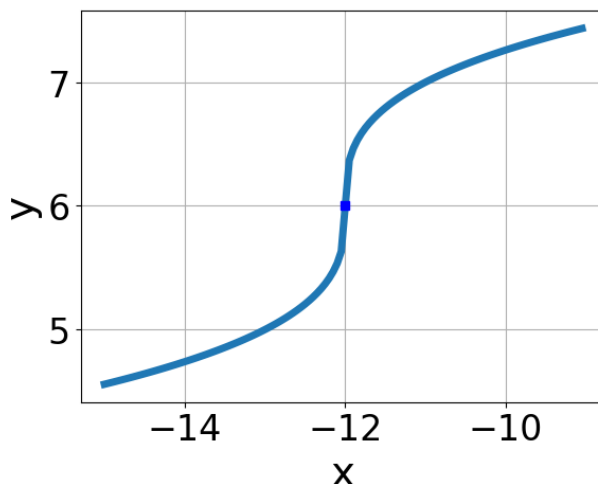
- A. All solutions lead to invalid or complex values in the equation.
  - B.  $x_1 \in [1.62, 1.72]$  and  $x_2 \in [-0.1, 3.5]$
  - C.  $x \in [-1.13, -0.71]$
  - D.  $x \in [-1.83, -1.09]$
  - E.  $x_1 \in [-1.83, -1.09]$  and  $x_2 \in [-3.3, 0.8]$
- 

15. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{3x - 6} - \sqrt{7x + 5} = 0$$

- A.  $x_1 \in [-0.81, -0.31]$  and  $x_2 \in [1, 4]$
  - B.  $x \in [-3.45, -2.19]$
  - C.  $x \in [-0.25, -0.06]$
  - D.  $x_1 \in [-3.45, -2.19]$  and  $x_2 \in [1, 4]$
  - E. All solutions lead to invalid or complex values in the equation.
- 

16. Choose the equation of the function graphed below.



- A.  $f(x) = -\sqrt[3]{x-12} + 6$
- B.  $f(x) = -\sqrt[3]{x+12} + 6$
- C.  $f(x) = \sqrt[3]{x-12} + 6$
- D.  $f(x) = \sqrt[3]{x+12} + 6$
- E. None of the above

17. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-16x^2 - 45} - \sqrt{-58x} = 0$$

- A.  $x \in [2.1, 3.1]$
- B. All solutions lead to invalid or complex values in the equation.
- C.  $x_1 \in [0.6, 1.2]$  and  $x_2 \in [2.5, 3.5]$
- D.  $x \in [0.6, 1.2]$
- E.  $x_1 \in [-1.9, -0.7]$  and  $x_2 \in [-3.5, 1.5]$

18. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{3x+4} - \sqrt{-9x+7} = 0$$



- A.  $x_1 \in [-2.5, -1.27]$  and  $x_2 \in [-0.21, 0.62]$
  - B.  $x \in [-0.67, 1.18]$
  - C.  $x_1 \in [-2.5, -1.27]$  and  $x_2 \in [0.5, 0.91]$
  - D. All solutions lead to invalid or complex values in the equation.
  - E.  $x \in [-1.12, -0.11]$
- 

19. What is the domain of the function below?

$$f(x) = \sqrt[4]{8x - 7}$$

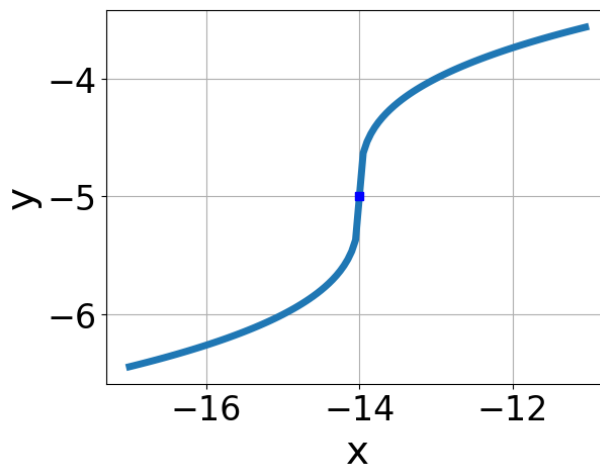
- A.  $(-\infty, \infty)$
  - B.  $(-\infty, a]$ , where  $a \in [1.05, 1.54]$
  - C.  $(-\infty, a]$ , where  $a \in [0.46, 1.03]$
  - D.  $[a, \infty)$ , where  $a \in [1.13, 1.28]$
  - E.  $[a, \infty)$ , where  $a \in [0.71, 0.89]$
- 

20. What is the domain of the function below?

$$f(x) = \sqrt[3]{8x - 9}$$

- A.  $(-\infty, \infty)$
  - B. The domain is  $[a, \infty)$ , where  $a \in [0.91, 1.47]$
  - C. The domain is  $[a, \infty)$ , where  $a \in [0.58, 1.05]$
  - D. The domain is  $(-\infty, a]$ , where  $a \in [0.99, 1.35]$
  - E. The domain is  $(-\infty, a]$ , where  $a \in [0.52, 1.05]$
- 

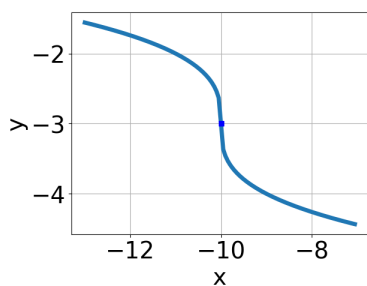
21. Choose the equation of the function graphed below.



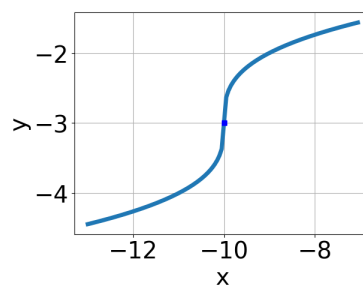
- A.  $f(x) = -\sqrt[3]{x-14} - 5$   
 B.  $f(x) = -\sqrt[3]{x+14} - 5$   
 C.  $f(x) = \sqrt[3]{x-14} - 5$   
 D.  $f(x) = \sqrt[3]{x+14} - 5$   
 E. None of the above

22. Choose the graph of the equation below.

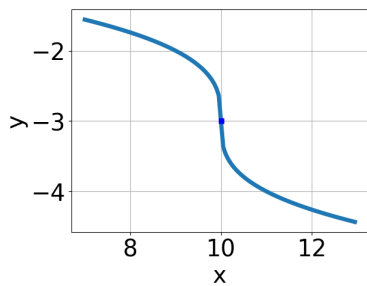
$$f(x) = -\sqrt[3]{x+10} - 3$$



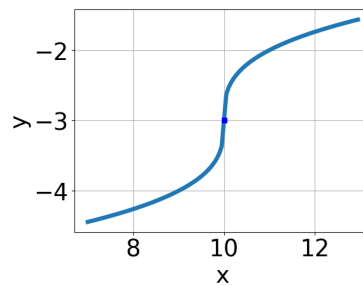
A.



C.



B.

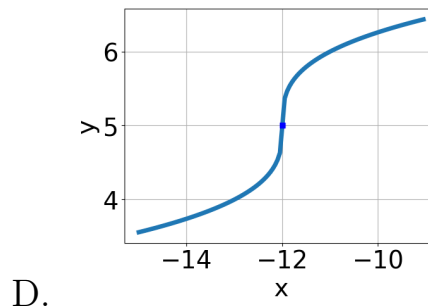
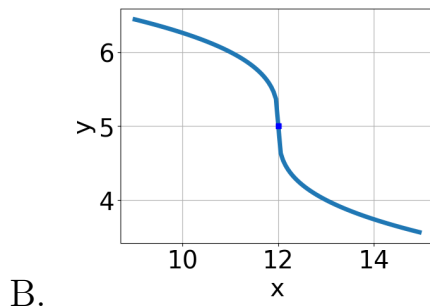
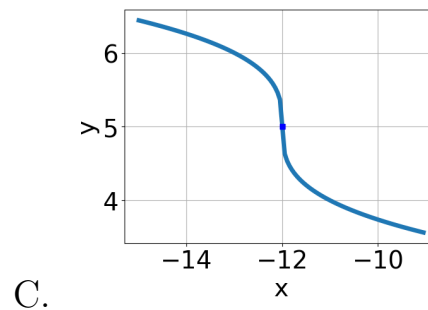
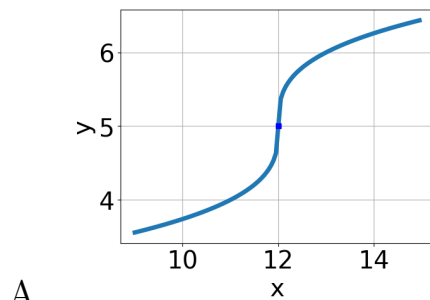


D.

E. None of the above.

23. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x - 12} + 5$$



E. None of the above.

24. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{72x^2 + 28} - \sqrt{-95x} = 0$$

A.  $x \in [-1.08, -0.68]$

B.  $x \in [-0.52, 0.09]$

C.  $x_1 \in [0.42, 0.48]$  and  $x_2 \in [0.4, 1.8]$

D.  $x_1 \in [-1.08, -0.68]$  and  $x_2 \in [-1, -0.4]$

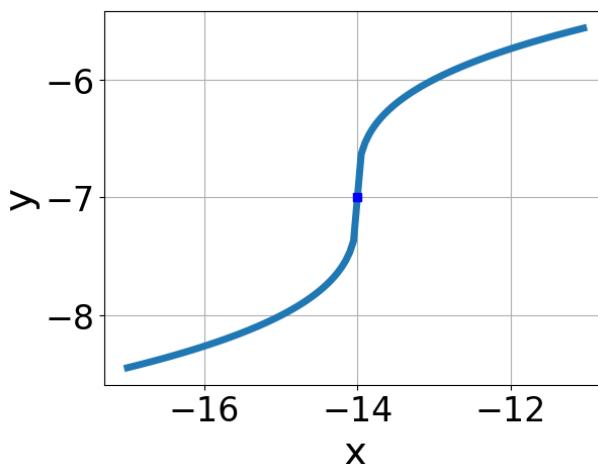
E. All solutions lead to invalid or complex values in the equation.

25. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-6x - 7} - \sqrt{-3x + 3} = 0$$

- A.  $x_1 \in [-1.28, -0.57]$  and  $x_2 \in [-1, 6]$
  - B. All solutions lead to invalid or complex values in the equation.
  - C.  $x \in [-3.86, -3.31]$
  - D.  $x \in [-1.63, -1.32]$
  - E.  $x_1 \in [-3.86, -3.31]$  and  $x_2 \in [-4.17, -0.17]$
- 

26. Choose the equation of the function graphed below.



- A.  $f(x) = \sqrt[3]{x + 14} - 7$
  - B.  $f(x) = -\sqrt[3]{x - 14} - 7$
  - C.  $f(x) = \sqrt[3]{x - 14} - 7$
  - D.  $f(x) = -\sqrt[3]{x + 14} - 7$
  - E. None of the above
- 

27. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{36x^2 - 42} - \sqrt{-6x} = 0$$

- A. All solutions lead to invalid or complex values in the equation.
  - B.  $x_1 \in [-1, 4]$  and  $x_2 \in [1.08, 1.41]$
  - C.  $x \in [-1, 4]$
  - D.  $x \in [-5.17, 0.83]$
  - E.  $x_1 \in [-5.17, 0.83]$  and  $x_2 \in [0.87, 1.09]$
- 

28. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{3x+9} - \sqrt{-8x-9} = 0$$

- A.  $x \in [-0.5, 2.1]$
  - B.  $x \in [-2.7, -0.1]$
  - C.  $x_1 \in [-5.4, -2.6]$  and  $x_2 \in [-1.3, 1.2]$
  - D.  $x_1 \in [-5.4, -2.6]$  and  $x_2 \in [-3.6, -1.5]$
  - E. All solutions lead to invalid or complex values in the equation.
- 

29. What is the domain of the function below?

$$f(x) = \sqrt[6]{-6x-4}$$

- A.  $(-\infty, \infty)$
  - B.  $[a, \infty)$ , where  $a \in [-1.87, -0.88]$
  - C.  $[a, \infty)$ , where  $a \in [-1.11, -0.03]$
  - D.  $(-\infty, a]$ , where  $a \in [-2, -0.91]$
  - E.  $(-\infty, a]$ , where  $a \in [-1.32, -0.62]$
- 

30. What is the domain of the function below?

$$f(x) = \sqrt[4]{-6x+7}$$

- A.  $[a, \infty)$ , where  $a \in [-0.42, 1.1]$
  - B.  $(-\infty, a]$ , where  $a \in [0.98, 1.2]$
  - C.  $(-\infty, a]$ , where  $a \in [0.83, 0.88]$
  - D.  $(-\infty, \infty)$
  - E.  $[a, \infty)$ , where  $a \in [0.94, 3.35]$
-